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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,309	02/09/2006	Samantha Jane O'Keefe	5001/0108PUS1	6328

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EXAMINER

MCNALLY, DANIEL

ART UNIT	PAPER NUMBER
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1791

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/531,309	Applicant(s) O'KEEFE ET AL.	
	Examiner DANIEL MCNALLY	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/13/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102/103

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 9, 10, 11 and 20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Camp [US2253059].

Camp discloses a method of producing gypsum board (column 1, line 1- column 3, line 68). The method comprises preparing a slurry of cementitious material, such as gypsum plaster or “stucco”, by mixing gypsum plaster and water in a mixer, the slurry is discharged from the mixer at a discharge port (37), and the slurry is discharged onto a paper cover sheet (56, 57, 58). The slurry in the mixer is agitated and is therefore considered to be in a turbulent state. The method also comprises introducing an accelerator between rings (26, 34) by a pipe (39) that leads through the cover of the mixer so that the accelerator is introduced a short time before the slurry is discharged from the port (37). The location of pipe (39) is considered to be the entrance to the mixer outlet because the slurry must pass from the main mixing area to the area

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between rings (26, 34) before it is discharged from the discharge port (37). When the slurry leaves the discharge port it enters a conduit (59, 60, 61) where it is then transported to the paper cover sheet.

In the event that it is unclear if the accelerator is introduced to a turbulent slurry at the entrance to the mixer container outlet, it would have been obvious to one of ordinary skill in the art at the time of invention to mix the accelerator into the slurry at the entrance to the outlet in order to ensure the reaction occurs on the paper cover sheet rather than in the mixing vessel.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Camp in view of Pilgrim [US447300].

Camp discloses a method of producing gypsum board. Applicant is referred to paragraph 3 above for a detailed discussion of Camp. Camp discloses dispensing the slurry onto a first paper sheet but does not disclose providing a second paper sheet on top of the slurry.

Pilgrim discloses a method of forming a gypsum board. The method comprising mixing the gypsum and water in a mixer (12) to form a slurry, dispensing the slurry from

the mixer onto a bottom sheet, the dispensed slurry is moved along a conveyor, a top sheet of paper is applied on top of the dispensed slurry and the assembly is passed through nip rolls to form gypsum board.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the method of Camp by applying a top facing sheet to the dispensed slurry as taught by Pilgrim in order to allow the gypsum board to be squeezed to a desired thickness between nip rolls.

6. Claims 1, 2, 9, 10, 11, 13, and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over Camp in view of Wittbold et al. [US6494609].

Camp discloses a method of producing gypsum board. Applicant is referred to paragraph 3 above for a detailed discussion of Camp.

In the event that it is not clear if the slurry in the mixer is in a turbulent state or that the accelerator is added at the entrance to the outlet, Wittbold teaches it would have been obvious the slurry is in a turbulent state and that the accelerator could be added at the entrance of the outlet. Wittbold discloses a method of making a gypsum board. The method comprises mixing calcined gypsum with water to form a slurry in a mixer, discharging the slurry from the mixer through a conduit onto a facing surface, and applying a second facing on top of the slurry to form the gypsum board. Wittbold discloses in the prior art the additives, including accelerators, were added to the slurry while the slurry was in a turbulent state. Wittbold also teaches an additive inlet portion (44) located at the entrance to the conduit or "outlet" comprising a nipple (40) for adding accelerator to the slurry.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the method of Camp by moving the accelerator inlet pipe closer to the entrance to the conduits as taught by Wittbold in order to ensure the accelerator is uniformly mixed and does not react in the mixer.

7. Claims 3, 4, 5, 8, 14, 15, 16, and 19 rejected under 35 U.S.C. 103(a) as being unpatentable over either one of Camp or Camp in view of Wittbold, and further in view of Amano et al. [US5246163].

Either one of Camp or Camp in view of Wittbold discloses a method of forming a gypsum board. Applicant is referred to paragraph 3 for a detailed discussion of Camp. Applicant is referred to paragraph 6 for a detailed discussion of Camp as modified by Wittbold. The references discussed in paragraphs 3 and 6 both disclose adding an accelerator to the slurry of gypsum and water. The references are silent as to using a water soluble salt which forms a sulphate.

Amano discloses a method of making a quick setting cementitious material. The method comprises mixing a cementitious material with an accelerating material to form a quick setting cementitious material, spraying the quick setting cementitious material onto a desired location and letting the cementitious material harden. Amano discloses the accelerating material as preferably a salt such as aluminum salt, which is a well known accelerating material for gypsum boards.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the method of either one of Camp or Camp in view of Wittbold by

using an aluminum salt as the accelerating material as taught by Amano in order to produce a gypsum board that will set quickly and be processed immediately.

With regard to claims 4, 5, 8, 15, 16 and 19 Amano discloses additives can be added in the form of powder, aqueous solution or a suspension.

8. Claims 5, 6, 7, 8, 16, 17, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over either one of Camp or Camp in view of Wittbold, and further in view of Plemons et al. [US3343818].

Either one of Camp or Camp in view of Wittbold discloses a method of forming a gypsum board. Applicant is referred to paragraph 3 for a detailed discussion of Camp. Applicant is referred to paragraph 6 for a detailed discussion of Camp as modified by Wittbold. The references discussed in paragraphs 3 and 6 both disclose adding an accelerator to the slurry of gypsum and water. The references are silent as what state the accelerator is.

Plemons discloses a method of making gypsum board. The method comprises mixing the components of the gypsum board in a mixer (10) to form a slurry, and dispensing the slurry onto a facing (32). The components of the slurry include calcined gypsum, foaming agent, water, starch and set accelerators. Plemons discloses the set accelerators are added to the mixer as slurry through inlet tube (16).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the method of either one Camp or Camp in view of Wittbold by adding a set accelerator to the slurry in the form of a slurry, aqueous solution, paste or

suspension as taught by Plemons in order to quickly and uniformly disperse the accelerator into the gypsum slurry.

9. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over either one of Camp or Camp in view of Wittbold, and further in view Stiling [US4176972].

Either one of Camp or Camp in view of Wittbold discloses a method of forming a gypsum board. Applicant is referred to paragraph 3 for a detailed discussion of Camp. Applicant is referred to paragraph 6 for a detailed discussion of Camp as modified by Wittbold. The references discussed in paragraphs 3 and 6 both disclose adding an accelerator to the slurry of gypsum and water. The references are silent as to the accelerator being in the form of finely wet ground gypsum.

Stiling discloses a method of mixing a slurry of gypsum and additives. The method comprises providing the parts of a slurry to the mixer and rotating a rotor disk of the mixer at 300 RPM to uniformly mix the slurry so that the slurry consists primarily of finely ground calcined gypsum solids.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the method of either one of Camp or Camp in view of Wittbold by mixing the slurry so that the slurry form a uniform mix of slurry primarily consisting of finely ground calcined gypsum solids so that the slurry can be passed smoothly through a conduit do to the lack of clumps and large particle sizes.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL MCNALLY whose telephone number is

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(571)272-2685. The examiner can normally be reached on Monday - Friday 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Daniel McNally/
Examiner
Art Unit 1791

/Jeff H. Aftergut/
Primary Examiner, Art Unit 1791

/DPM/
February 26, 2008